Notice of Allowability	Application No.	Applicant(s)	
	09/847,922	OVALEKAR, SAMEER V.	
	Examiner	Art Unit	
	Jason M Perilla	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the amendment filed November 10, 2004*.

2. ☒ The allowed claim(s) is/are *1-15*.

3. ☐ The drawings filed on _____ are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 20050401.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *20050401* .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Steve Mendelsohn on March 30, 2005.

The application has been amended as follows wherein claims 1, 11, and 15 are replaced in their entirety:

1. An apparatus ~~Apparatus~~ for correlating a sequence of received samples with chip values of a locally generated sequence ~~for one of a plurality of spreading rates~~, the apparatus comprising:

a first set of combiners configured as a first level of a tree structure to receive the sequence of received samples in groups, each combiner combining a group of at least two received samples based on corresponding chip values of the locally generated sequence to generate a correlation value for the group at the first level; and

a second set of combiners configured as one or more additional levels of the tree structure, wherein, each combiner of the second set combines a group of at least two correlation values of ~~a previous~~ an immediately preceding level of the tree structure to generate a correlation value for the group at a current level of the tree structure, and

wherein each combiner of the first and second sets comprises an output tap that enables ~~the corresponding~~ a generated correlation value to be read out of the tree structure ~~for~~ corresponding to a one of ~~the~~ a plurality of spreading rates of the locally generated sequence.

Regarding claim 3, in line 2, "the corresponding samples" is replaced by –the corresponding received samples--.

Regarding claim 5, in line 2, "of length of X^{M}" is replaced by –of length X^{M}--.

Regarding claim 6, in line 4, "values for a group from the previous" is replaced by –values from a previous--.

11. A method of correlating a sequence of received samples with chip values of a locally generated sequence ~~for one of a plurality of spreading rates~~, the method comprising the steps of:

a) combining, at a first level of a tree structure, groups of at least two received samples based on corresponding chip values of the locally generated sequence to generate a correlation value for each group at the first level; and

b) combining, at one or more additional levels of the tree structure, a group of at least two correlation values of ~~a previous~~ an immediately preceding level of the tree structure to generate a correlation value for the group at a current level of the tree structure, and

c) providing a correlation value ~~of a group~~ at ~~a corresponding output tap~~ an output tap of any selected level of the tree structure ~~for~~ corresponding to a one of ~~the~~ a plurality of spreading rates of the locally generated sequence.

Regarding claim 12, in line 2, "of length of X^M" is replaced by –of length X^M--.

Regarding claim 13, in line 2, "n integrated" is replaced by –an integrated--.

15. A computer-readable medium having stored thereon a plurality of instructions, the plurality of instructions including instructions which, when executed by a processor, cause the processor to implement a method for correlating a sequence of received samples with chip values of a locally generated sequence ~~for one of a plurality of spreading rates~~, the method comprising the steps of:

a) combining, at a first level of a tree structure, groups of at least two received samples based on corresponding chip values of the locally generated sequence to generate a correlation value for each group at the first level; and

b) combining, at one or more additional levels of the tree structure, a group of at least two correlation values of ~~a previous~~ an immediately preceding level of the tree structure to generate a correlation value for the group at a current level of the tree structure, and

c) providing a correlation value ~~of a group~~ at ~~a corresponding output tap~~ an output tap of any selected level of the tree structure ~~for~~ corresponding to a one of ~~the~~ a plurality of spreading rates of the locally generated sequence.

2. The following changes to the drawings have been approved by the examiner and agreed upon by applicant:

A replacement drawing sheet for figures 1 and 2 having clearly legible reference numbers.

In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

Allowable Subject Matter

3. Claims 1-15 are allowed.

4. The following is a statement of reasons for the indication of allowable subject matter:

Claims 1-15 are allowed over the prior art of record because the prior art of record does not anticipate or obviate an adder tree with an output tap at each combining node of the tree wherein a correlation for a particular spreading rate can be output corresponding to the particular output tap. Additionally, in view of the remarks of the Applicant filed November 10, 2004, the prior art rejections of the first office action filed September 3, 2004 have been withdrawn because the Applicant's arguments were persuasive.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following prior art of record not relied upon above is cited to further show the state of the art with respect to adder tree correlators.

U.S. Pat. Pub. 2003/0052711

U.S. Pat. No. 6823000

U.S. Pat. No. 6567483

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M Perilla whose telephone number is (571) 272-3055. The examiner can normally be reached on M-F 8-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571) 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jason M. Perilla
March 30, 2005

jmp

CHIEH M. FAN
PRIMARY EXAMINER